

## **REMARKS**

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-40 are pending in the application. Claims 1 and 40 are independent claims. Note, many claims are amended hereby merely to rectify minor informalities (e.g., to remedy potential antecedent basis problems). Applicant respectfully traverses the rejections of the current Office Action.

### **Claim Rejections Under 35 U.S.C. § 102**

**Claims 1-3, 5-12, 14, 15, 18, 21-25 and 27-40** stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,157,927 to Schaefer et al. (hereinafter "Schaefer"). Applicant respectfully traverses the rejection.

#### **Amended independent claim 1 recites:**

Interfaces, stored on one or more computer-readable media, to be called on kernel transaction management objects, comprising:  
a transaction manager, including:

application program interfaces (APIs) to implement operations on *a kernel transaction object (TX), the TX representing a transaction, the TX being accessible by at least one process participating in the transaction;*

APIs to implement operations on *a kernel resource management object (RMO), the RMO representing a relationship between a TX associated with the transaction manager and at least one resource that participates in the transaction, the resource being an entity capable of storing data in a durable state;* and

APIs to implement operations on a kernel enlistment (EN) object, the EN representing a relationship between a resource manager and the transaction. (Emphasis added.)

The Office maintains that the Schaefer discloses a transaction object 78, which includes a method ITransaction Interface, functions in the same manner as

the TX recited in claim 1. The Applicant respectfully disagrees. In particular, Schaefer does not disclose that the transaction, which is represented by the transaction object 78, can access or open the transaction object 78, as in the claimed invention.

According to Schaefer, the transaction object 78 "represents the transaction for which that MTS component is attempting to perform work." (*See column 15, lines 17-19.*) The indicated disclosure of Schaefer shows that the MTS component may indirectly perform work for a transaction via the transaction object 78. The MTS component achieves this indirect performance by asking the transaction object 78 to obtain information about the transaction that the object 78 represents. (*See column 15, lines 28-31.*)

To further clarify the foregoing, Schaefer only describes allowing the transaction object 78 to obtain information from the transaction that it is representing. Schaefer does not disclose that the transaction can access or open the transaction 78. In distinction, the claimed invention enables such functionality. Therefore, Schaefer does not disclose "a kernel transaction object (TX), the TX representing a transaction, *the TX being accessible by at least one process participating in the transaction.*" (See claim 1.)

For at least the reasons stated above, Applicant respectfully requests the Office to reconsider and withdraw the rejection of claim 1.

The Office further maintains that the Schaefer discloses IResourceManager Interface (hereinafter "resource manager") functions in the same manner as the "kernel resource management object (RMO)" recited in claim 1. The Applicant respectfully disagrees. In particular, Applicant is unable to find anything that

discloses that the resource manager of Schaefer is capable of functioning in the same manner as the claimed "a kernel resource management object (RMO.)"

More specifically, according to Schaefer, the resource manager is an interface of a Resource Manager object 108. The resource manager provides an Enlist method, a Reenlist method, and a ReenlistmentComplete method. (*See column 15, lines 53-55.*) The Enlist method is invoked by a resource manager 70 to enlist a particular branch of a global transaction with a Distributed Transaction Coordinator 56. The Reenlist method is invoked by the resource manager 70 to reenlist with the Distributed Transaction Coordinator 56, for example, after a failure. The ReenlistmentComplete method is invoked during recovery after all in-doubt transaction branches have been recovered. (*See column 15, lines 51-62.*)

However, the Schaefer resource manager does not operate in the same fashion as the "kernel resource management object (RMO)" recited in claim 1. In particular, Applicant is unable to find anything in Schaefer that discloses that the resource manager of Schaefer is capable of "representing a relationship between a TX associated with the transaction manager and at least one resource that participates in the transaction, the resource being an entity capable of storing data in a durable state." (See claim 1.)

For at least the additional reasons stated above, Applicant respectfully requests the Office to reconsider and withdraw the rejection of claim 1.

**Dependent claims 2-3, 5-12, 14, 15, 18, 21-25, and 27-39** depend from claim 1. The rejection with regard to these claims should be withdrawn by virtue of the dependency. Moreover, these claims recite features that, when taken together with those of claim 1, are not disclosed by Schaefer.

**Amended independent claim 40** recites:

An apparatus for implementing a transaction, comprising:  
a transaction manager, including:

*a kernel transaction object (TX) to represent a transaction, the TX being accessible by at least one process participating in the transaction;*

*a kernel resource manager object (RMO) to represent a relationship between a TX associated with the transaction manager and at least one resource that participates in the transaction, the resource being an entity capable of storing data in a durable state; and*

*a kernel enlistment object (EN) to represent a relationship between a resource manager and the transaction, wherein two-phase commit processing is executed by calling APIs on the TX, the RMO, and the EN.*

The Office maintains that the Schaefer discloses a transaction object 78, which includes a method ITransaction Interface, that functions in the same manner as the TX recited in claim 40. The Applicant respectfully disagrees. In particular, Schaefer does not disclose that the transaction, which is represented by the transaction object 78, can access or open the transaction object 78, as in the claimed invention. Accordingly, at least the claim 40 limitation "a kernel transaction object (TX) to represent a transaction, the TX being accessible by at least one process participating in the transaction" is not disclosed by Schaefer.

The Office further maintains that the Schaefer discloses IResourceManager Interface (hereinafter "resource manager") that functions in the same manner as the "kernel resource management object (RMO)" recited in claim 40. The Applicant respectfully disagrees. In particular, Applicant is unable to find anything that discloses that the resource manager of Schaefer is capable of functioning in the same manner as the claim 40 limitation "a kernel resource management object (RMO.)"

Additional details concerning the deficiencies of Schaefer are given hereinabove, and such discussion may be applied to claim 40, as well. The Office is respectfully requested to consider the above discussion.

Since Schaefer does not disclose at least the above discussed limitations of the rejected claim, the claim is not anticipated. Therefore, Applicant respectfully requests that the 35 U.S.C. § 102(b) rejection be withdrawn.

*Claim Rejections Under 35 U.S.C. § 103*

**Claims 4, 16, 17, 20 and 26** stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schaefer in view of Klein et al., U.S. Patent No. 6,728,958 (hereinafter "Klein"). **Claims 13 and 19** stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schaefer in view of Lejeune et al., U.S. Patent No. 6,101,527 (hereinafter "Lejeune").

**Claims 4, 16, 17, 20 and 26** depend from claim 1 and hence incorporate the features of claim 1. As noted above, Schaefer fails to disclose limitations of claim 1. The added teachings of Klein do not remedy those shortcomings, nor does the rejection make any assertion to that effect. Therefore, the combination of Schaefer and Klein fails to suggest the recitation of claim 1, from which claims 4, 16, 17, 20, and 26 depend. Moreover, these dependent claims recite features that, when taken together with those of claim 1, are not rendered obvious by the proposed combination of Schaefer and Klein.

**Claims 13 and 19** depend from claim 1 and hence incorporate the features of claim 1. As noted previously, Schaefer does not disclose features of claim 1. Lejeune fails to remedy the deficiencies of Schaefer, nor does the rejection make any assertion to that effect. Accordingly, the proposed combination of Schaefer

and Lejeune fails to suggest the recitation of claim 1, from which claims 13 and 19 depend. Moreover, these dependent claims recite features that, when taken together with those of claim 1, are not rendered obvious by the proposed combination of Schaefer and Lejeune.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a).

Conclusion

In accordance with the foregoing remarks, Applicant believes that the pending claims are allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the Applicant at the email address provided below.

Respectfully Submitted,

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By: /Tim R. Wyckoff/

David S. Lee  
Reg. No. 38,222  
(206) 315-7912

Tim R. Wyckoff  
Reg. No. 46,175  
Email: wyc\_law@live.com